

***Ponera coarctata* var. *crassisquama* Emery, 1916 a new synonym of *P. testacea* Emery, 1895 (Hymenoptera, Formicidae)**

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ABSTRACT

The synonymy of Ponera testacea Emery, 1895 (sensu Csősz & Seifert, 2003) = Ponera coarctata var. crassisquama Emery, 1916 n. syn. is proposed.

Key words: Hymenoptera, Formicidae, *Ponera coarctata* var. *crassisquama*, *Ponera testacea*, *Ponera coarctata*, synonymies, Italy.

RIASSUNTO

Viene proposta la sinonimia *Ponera testacea* Emery, 1895 (sensu Csősz & Seifert, 2003) = *Ponera coarctata* var. *crassisquama* Emery, 1916 n. syn.

Parole chiave: Hymenoptera, Formicidae, *Ponera coarctata* var. *crassisquama*, *Ponera testacea*, *Ponera coarctata*, synonymies, Italy.

INTRODUCTION

The genus *Ponera* Latreille was cited from Italy for the first time by Mayr (1853: 102), who documented the species *Ponera coarctata* (Latr.) (sub *P. contracta* Ltr.) from the Piedmont area. However, information regarding the exact collecting localities was not given. Several years later Emery (1895: 294) described *Ponera coarctata* var. *testacea* based on material from south-west Europe (southern France, Corsica, Liguria and Spain). This variety is characterized by specimens smaller in size than the type form and which are of a clearer color as evidenced by Emery who in the short description stated: “di colore testaceo uniforme o talvolta più o meno bruno sul dorso” (“testaceous colour uniform or sometimes rather tawny on the dorsum”).

Subsequently, Emery (1916a: 54) described a second variety, named *Ponera coarctata* var. *crassisquama* that had been identified on Italian specimens in Chieti, Lippiano and Pergine (Arezzo) and Belvedere near Genoa; he also noted a female specimen that had been captured in Monte Santo (Teramo). He added to these finds a worker specimen from Edough in Tunisia. Morphologically this variety is also characterized by more clearly colored specimens, but shows a greater thickness of the petiole with regard to the var. *testacea*.

Taylor (1967) published a review of the genus *Ponera*, and placed in the synonymy of the species *P. coarctata*

(pag. 21-22) the multiple forms (subspecies and variety) associated with it including the var. *testacea* Emery and the var. *crassisquama* Emery. These choices were justified by the author as he believed these were single specimens subject to intranidale allometry or morphologic expressions of local populations positioned at the margins of the areale, that in particular ecological or climatic conditions, often generate eco-morphs. It should be noted that on pag. 22 of Taylor's work the petiole of *P. coarctata* (specimen from Fontainebleau, France) is represented by a specimen of the uncommon var. *testacea*.

Csősz and Seifert (2003) have recently re-examined the specimens of *P. coarctata* var. *testacea* Emery. They consider this “variety” a *sibling species* which may be distinguished from the typical form, apart from the clear colour, by some substantial morphologic and biometric differences of the alitrunk and the petiole. In particular, the pronotum appears smaller (MH = 19 mm) and the petiolar scale appears to be of a different shape. However, in their work the two authors did not examine the other European synonym of *P. coarctata*, that is *P. coarctata* var. *crassisquama* Emery.

In the summer of 1997, during a short stay in Apulia, the author carried out some myrmecological collecting in Acquarica del Capo (southern Salento). By winnowing humid mould located at the base of a small lemon tree numerous workers of the genus *Ponera* were

found. The specimens collected, approximately thirty in all, were characterized by their clear ochre colouring and a rather thickened petiolar scale. A more thorough examination has shown that the petiolar node is similar, if not identical, to that illustrated by Emery (1916a, 1916b) as being representative of *P. coarctata* var. *crassiquama*.

The type specimens of the aforesaid variety and *P. testacea* Emery (Csösz & Seifert, 2003) kept in the Emery collection housed in the Natural History Museum "G. Doria" of Genoa (MSNG) were examined and compared with some specimens of *P. coarctata* s.str. in the author's personal collection. Other specimens of *P. coarctata* and *P. testacea* of more recent capture have also been found among the collections of the Natural History Museum of Verona.

Morphometric analyses

For the present study some measurements have been taken using a stereomicroscope Leica MZ 12s to 100X.

Only the minimum and maximum values are indicated and are expressed in millimeters. The following acronyms have been used: HW = "head width" (maximum width of the head); HL = "head length" (maximum length of the head in dorsal view, excluding the mandible); SL = "scape length" (length of the scape, excluding the condylar articulation); ML = "mesosoma length" (the diagonal length of the mesosoma in profile); MH = "mesosoma height" (the maximum height of the mesosoma). PW = "petiolar width" (width of the petiole in dorsal view; v. Csösz & Seifert, 2003); PL = "petiolar length" (thickness of petiolar scale, in dorsal view).

Ponera coarctata

8 workers: HL 0,69-0,74; HW 0,52- 0,57; SL 0,48- 0,53; ML 0,84-0,87; MH 0,22; PW 0,18- 0,19; PL 0,11.

Ponera testacea

Lectotypus and paralectotypes (6 workers): HL 0,61-0,64; HW 0,46; SL 0,45-0,47; ML 0,75; PW 0,20-0,21; PL 0,19-0,20.

Ponera coarctata v. *crassiquama*

Lectotypus (designated here, worker): HL 0,61; HW 0,47; SL 0,47; ML 0,81; PW 0,24. PL 0,24- Paralectotypes (3 workers): HL 0,61; HW 0,45-0,46; ML 0,79-0,80; PW 0,20-0,22; PL 0,14-0,15. Material from Salento (Italy, Lecce, Acquarica del Capo 23.VI.1997, leg. Scupola (colony N97-174A) (collection Scupola: ASC) 15 workers: HL 0,61, 0,62; HW 0,46-0,48, SL 0,45-0,46; ML 0,79; MH 0,19; PW 0,20-0,21; PL 0,16.

DISCUSSION

The results of the present study show that:

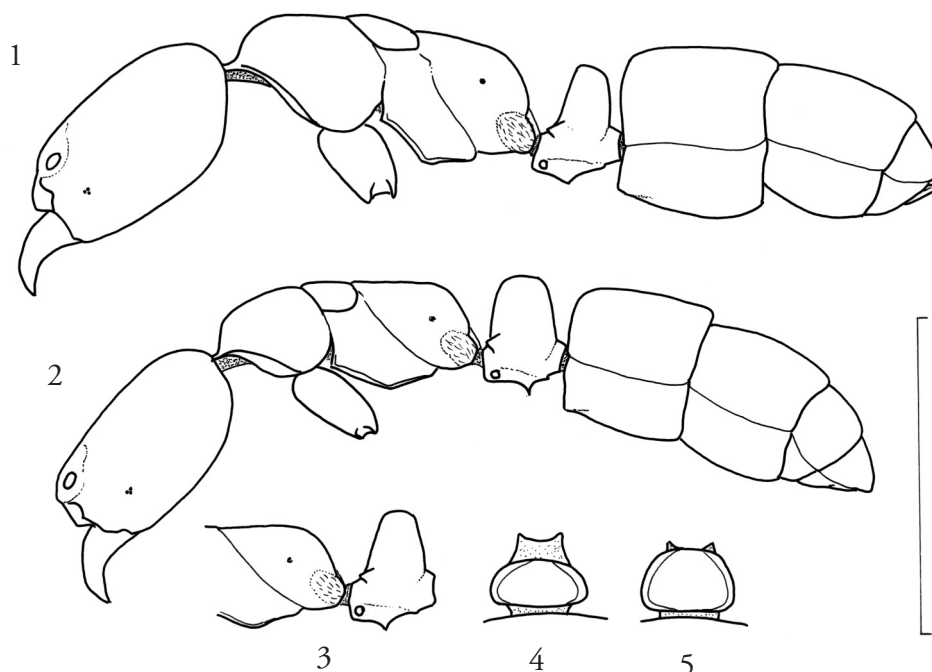
- A) *P. coarctata* (Latreille) is characterized by: the body being black or dark brown in colour and of greater dimensions, the mesosoma with MH = 0,22 mm, a less thickened petiolar scale within which, in dorsal view, the front part of the segment is uncovered (Fig. 4); the ventral process of the petiole (in lateral view) does not have a concave inferior margin and towards the posterior is neither acuminate nor projecting downwards (Fig. 1).
- B) *P. testacea* Emery is characterized by: a clear ochre color, much smaller dimensions, a rather high mesosoma (MH = 0,19 mm), petiolar scale in dorsal view of more normal development and covering nearly all of the front part of the segment. The latter character may be somewhat variable as is shown by the petiole of one syntype (loc. Porto Maurizio, currently Imperia) (Fig. 3). The ventral process of the concave inferior margin is visible (lateral view) and is distally acuminate and projecting downwards (Fig. 3).
- C) *P. coarctata* var. *crassiquama* Emery is quite similar to *P. testacea* Emery. The only difference noted, apart from the often darker or brown color, is represented in the var. *crassiquama* by the conformation of the margin, descendant of the propodeum, which at the splice point with the bulla of the metapleural gland, forms a small angle (Fig. 2). In *P. testacea*, such an angle is imperceptible.
- D) The specimens collected by the author in Salento are nearly identical to the types of *P. coarctata* var. *crassiquama*.

It is the author's opinion based on these elements that *P. testacea* and *P. coarctata* var. *crassiquama* are identical. The measurements also support this hypothesis. In fact, the values HL, HW, To, SL, are similar or equal and, moreover, are always inferior to those known for *P. coarctata*. The small morphologic difference noted at the level of the propodeum (present also in salentini's specimens) probably may be considered as being within the field of the variability of the taxon.

The new synonymical combination proposed is the following:

Ponera testacea Emery

Ponera coarctata var. *testacea* Emery, 1895: 294, workers lectotypus and paralectotypes, ITALY and



Figs. 1-5 - (Scale bar: 1 mm). 1 - lateral view of worker of *Ponera coarctata*; 2 - lateral view of worker of *P. coarctata* v. *crassisquama*; 3 - lateral view of petiole and propodeum of the worker of *P. testacea*; 4 - lateral view of petiole of *P. coarctata*; 5 - lateral view of petiole of *P. coarctata* v. *crassisquama*.

FRANCE, several localities (MSNG).

Ponera testacea Emery. Csősz and Seifert, 2003: 207. [Elevated to species]

Ponera coarctata var. *crassisquama* Emery, 1916. workers lectotypus and paralectotypes (MSNG): ITALY: Chieti, Lippiano, Pergine (Arezzo), Belvedere (Genoa) (Andreini); Tunisia: Edough. **n. syn.**

In this work the lectotypus of the var. *crassisquama* is designated, characterized by the first upper specimens of the four present on one pin of syntypes. The specimens are labeled:

1) Chieti dint., 1912 Andreini lgt. 2) *Ponera coarctata* var. *crassisquama* Emery; 3) Lectotypus *Ponera coarctata* var. *crassisquama* Emery, riv. Scupola 2004. 4) *Ponera coarctata* v. *crassisquama* Em. = *Ponera testacea* Em., Det. Scupola 2004.

Consequently in Italy there are currently two species of *Ponera*:

1) *P. coarctata* (Latreille, 1802), common and widely diffused throughout the peninsula and islands;

2) *P. testacea* Emery, 1895, rare and localized: LOMBARDY: Spilamberto (Modena), Castelvetro (Modena); LIGURIA: Portomaurizio (Imperia), Belvedere (Genoa),

Rapallo (Genoa); EMILIA ROMAGNA: Imola (Bologna); TUSCANY: Lippiano, Pergine (Arezzo), Elba Island, Giglio Island, Capraia Island; ABRUZZI: Chieti, Monte Santo (Teramo); SARDINIA: Asuni (Oristano); CALABRIA: Sambiase (ViboValenzia); SICILY: Avola (Siracusa), Ferla (Siracusa), Nicolosi: Monti Rossi (Catania); (Baroni Urbani, 1971; Csősz & Seifert, 2003). APULIA: Acquarica del Capo (Lecce).

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